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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/923,803

08/08/2001

Toshiaki Kurihara

4468-021

9634

22429

7590

04/29/2005

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EXAMINER

SHAH, CHIRAG G

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/923,803	Applicant(s) <input checked="" type="checkbox"/> KURIHARA ET AL.	
	Examiner Chirag G Shah	Art Unit 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2001.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/8/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3 sheets</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Abstract*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because exceeds 150 words and contains two paragraphs. Correction is required. See MPEP § 608.01(b).

3. The abstract of the disclosure is objected to because "Fig. 1" is written on bottom of the abstract.

Correction is required. See MPEP § 608.01(b).

### *Oath/Declaration*

4. The oath or declaration is defective filed on 11/13/01. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:  
It does not identify the citizenship of each inventor.

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It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either on an application data sheet or supplemental oath or declaration.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-6 and 9-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Cutler et al. (U.S. Patent No. 6,219,340), hereinafter referred as Cutler in view of Katayama (U.S. Patent No. 5,075,618).

Regarding claims 1, 9 and 10, Cutler discloses in **figures 1 and 2** of a physical quantity display device [*code domain display 19 within a computer-readable medium, code analyzer under control of CDMA system as in col. 2, lines 49-53*] for displaying physical quantity [*power level, see fig. 2*] of multiple signals in every predetermined channel while demodulating signals onto which channels with different spreading code lengths are multiplexed [**CDMA system employing layered orthogonal codes as in col. 1, lines 8-18; Note: according to CDMA system, the forward link CDMA system may use orthogonal codes to separate the users, transmitted signals are multiplexed and passed through a radio channel and receiver uses the same code to demodulated the signal and recover the data], comprising:**

the function of storing therein both display object channels to be displayed [as disclosed in fig. 2, *the code domain power display within the code analyzer displays the (stored) active and inactive code channels (display object channels)*] and the spreading code length of said display object channels [as disclosed in col. 4, lines 3-20 and as in fig. 2, *the code domain power display provides the length of each active code channel by the width of the bars and by the color of the bars, i.e., if code layer one has four code channels, the width of the bar for each channel will be  $\frac{1}{4}$  of the total display width (length)*];

the function of calculating physical quantity (*pertinent to power, as mentioned in light of spec. page 12*) of said display object channels [as disclosed in col. 3, lines 24-43, *active code channel ID block 18, within the code analyzer identifies which code channels are active within each layer, this is performed by analyzing (calculating) power distribution over the code channels. This enables a code domain power display 19 (which is within the analyzer) to determine (calculate) code domain power (quantity/level) for each code channel*]; and

a physical quantity display means [fig. 2 *discloses of an example of display and interface generated by code domain power display 19 within the code analyzer*] for displaying the physical quantity of said display object channels [as disclosed in col. 4, lines 50-61 and as in fig 2, *the power level (quantity) for active code channels in the C2-8 active code layers are displayed using hollow bars*].

Cutler teaches that a calculation and storage functions as discussed above take place within the code analyzer prior to displaying the power quantity levels

for each code channel, however, *Cutler fails to explicitly disclose a physical quantity display device having a channel storage means and a calculation means for performing the respective steps and processes.*

Katayama teaches in **fig. 1A** of a waveform spectrum analyzer including a display having the function of simultaneously displaying transmission characteristics. Katayama discloses in **fig. 1A and in col. 9, lines 54-56** of a first display section 14, within the spectrum analyzer having a *calculation unit/means*. Katayama further discloses in **col. 10, lines 5-26** of a *memory 12*, storage device for storing information related to spectrum display.

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention for Cutler invention to include within the analyzer a storage processor/means and calculation processor/means performing the respective functions as taught by Katayama. **One is motivated as such in order to simultaneously measure and display the transmission characteristics for purposes of observation or resolution for any network condition** (*Katayama, col. 3, lines 5-20*).

Regarding claim 3, Cutler discloses in **fig. 2**, wherein displaying physical quantity display [*fig. 2 discloses of an example of display and interface generated by code domain power display 19 within the code analyzer*] displays physical quantity of the display object channels while arranging the display object channels in turn on the same axis [*code domain power display 19 within a code analyzer displays in figure 2, display object channels (code channel C8 and C7) on the same axis, where active code channels in C8 and C7 are displayed using Hollow bars*] as claim.

Regarding claim 4, Cutler discloses in **fig. 2** wherein displaying physical quantity display *[fig. 2 discloses of an example of display and interface generated by code domain power display 19 within the code analyzer]* displays physical quantity [code domain power display in **fig. 2**, *displays power levels quantities for each active code channel for each code layer*] while adding inherent designation [as disclosed in **col. 4**, lines 20-30, *inherent designation such as hollow bar for active channels and a color key 35 in fig. 2 identifies the color used for code channels in each code layer*] to said display object channels as claim.

Regarding claim 5, Cutler discloses in **col. 3**, lines 30-43, wherein the physical quantity is quantity derived from the power as claim.

Regarding claim 6, Cutler discloses in **fig. 2** a physical quantity display device *[fig. 2 discloses of an example of display and interface generated by code domain power display 19 within the code analyzer]*, farther comprising:

a channel selection means [as disclosed in **col. 4**, lines 20-25, *user may utilize a pull down menu 33 is used to select a number of screens displayed in a window 30*] for selecting any one of said display object channels [as disclosed in **fig. 2** and in **col. 2**, lines 30-36, *the first screen 31 provides a current composite selection view and the second screen provides power symbols rates for a single channel selected*]; and

a different kind physical quantity display means for displaying different kind physical quantity, which is different kind from said physical quantity, of the selected

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display object channel at different area within a screen on which the physical quantity of said display object channels is displayed [as disclosed in col. 5, lines 42-61 and col. 6, lines 23-30, *a different kind of physical quantity may be selected within a screen by utilizing another pull down menu to select multiple/alternate views such as power levels for inactive channels (screen 32) or code rate or code number, which being different from selection power levels for active channels*] as claim.

7. Claim 2 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Cutler et al. (U.S. Patent No. 6,219,340), hereinafter referred as Cutler in view of Katayama (U.S. Patent No. 5,075,618) as applied to claims 1, 3-6 and 9-10 above, and further in view of Birgenheier (XP 000559992, Overview of Code-Domain Power Timing, and Phase Measurements).

Regarding claim 2, Cutler discloses in col. 1, lines 8-11 of displaying power levels for CDMA signals with layered orthogonal codes. Cutler in view of Katayama explicitly fails to disclose a physical quantity display device, wherein Walsh Function is used as the display device for spreading code, and length of said Walsh Function is the spreading code length.

Birgenheier discloses in fig. 19a of a code domain analyzer, providing a calculation and measurement via a display of code-domain power for a pilot paging channel, sync channel and one full-rate traffic channel. Birgenheier further discloses in section “**Code-Domain Power Spectrum**” on pages 79-80 of employing Walsh Function for spreading code, enabling to obtain percentages of signal energy in the pilot and code channel.



Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention for Cutler in view of Katayama's invention which uses layered orthogonal codes as spreading code to include using Walsh Function as the spreading code as taught by Birgenheier. **One is motivated as such since Walsh functions are orthogonal (Birgenheier 74), ensuring a reduction of multi-access interference.**

Regarding claim 7, Cutler in view of Katayama discloses a physical quantity display device. Cutler further discloses **col. 3, lines 30-43**, wherein said physical quantity is quantity derived from the power. Cutler further discloses in **col. 5, lines 42-61 and col. 6, lines 23-30**, a different kind of physical quantity may be selected within a screen by utilizing another pull down menu to select multiple/alternate views such as power levels for inactive channels (screen 32) or code rate or code number, which being different from selection power levels for active channels.

***Cutler in view of Katayama fail to disclose the different kind physical quantity is either an error or demodulation data.***

Birgenheier discloses in **figures 13 and 14** of display providing **timing and frequency error corresponding to code domain power**. Furthermore, **fig. 19** discloses of code domain analyzer displaying pilot, paging channel, sync channel and full-rate traffic active channel. The code domain analyzer in the respective figure provides **(in fig. 19a) code domain power measurements; provides (in fig.19b) time-offset measurements; and provides (in fig. 19c) phase offset measurements**. The display within the analyzer thus provides the different kind of physical quantity such as time errors and phase differences between the pilot channel and other code channels.

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Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Cutler in view of Katayama to include the different kind of physical quantity being an error measurement as taught by Birgenheier. **One is motivated as such in order to determine how well aligned the code channels are in time and in phase** (*Birgenheier 73*).

*Allowable Subject Matter*

8. Claim 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703)305-3988, (for formal communications intended for entry)

**Or:**

(703)305-3988 (for informal or draft communications, please label "Proposed" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

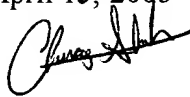
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 6:45 to 4:15, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs  
April 18, 2005



Chirag Shah  
AU2664